

Exhibit B

SOLIDWORKS CONFIDENTIAL

PRODUCT REQUIREMENTS

| | | |
|-------------------------|--|----------------------------------|
| Title: | Promote and demote components in assemblies | |
| M.C.I. #: | 99 ASM 2052 | File: 2052 Pro-Demote.doc |
| Written by: | MGG | Dev Contact: JPD/DJC |
| Last update: | 11 December, 1998 | Time Allotted: 2 |
| With edits from: | DJC, RPZ | |

Introduction:

Customers often change the structure of an assembly early in the design. The following scenarios are common:

- A small group of parts in the top-level becomes a sub-assembly.
- A sub-assembly is “dissolved” and its components moved back to the level above.
- Components need to be moved from one sub-assembly to another.

Minimum Requirements (in order of priority):

(“Components” always means parts and/or sub-assemblies.)

- 1) **Create New:** A new sub-assembly can be created at any assembly level, and any number of components from that level moved into the new sub-assembly, in one operation. The origin of the new sub-assembly is placed at the origin of the first-selected component, and the first component is fixed in the sub-assy.
- 2) **Dissolve:** A sub-assembly can be “dissolved” such that its components are moved to the sub-assembly’s immediate parent, and the sub-assembly deleted, in one operation.
- 3) **Move:** A component in any assembly can be moved to any other assembly (top-level or sub-assembly). Multiple components can be moved at once, as long as they are from the same assembly.
- 4) **Physical Position:** In all cases, components retain their physical position in the assembly.
- 5) **Mates:** Mates are retained for “up” or “down” moves by moving them to different assemblies as necessary to remain valid. It’s understood that components may go over- or under-defined as a result of a move.

Additional Requirements/Future Considerations:

- **In-Context Features:** In-context features are moved up as necessary to keep them valid.

- **Dependent items:** Items like component patterns and assembly features are moved with the component whenever possible.
- **Mates/Lateral Moves:** Whenever a component is moved “laterally” (i.e. not up or down in the tree), the mates are deleted.
- Parts from **different locations** can be moved at once.
- Sometimes one part needs to be divided into several and made into a sub-assembly. Therefore, we should make whatever allowances are needed for this to work in the future.
- The drag interaction is done so as not to preclude dragging for “reorder for visual grouping” (i.e. within the same assembly).
- **All Instances:** If the user uses the “move into new” or “dissolve” functions on one instance of a component, they should have the option to do it on all instances.

Proposed User Interface:

- **RMB Menu Items:** The new items “New assembly” and “Move to new assembly”, and “Dissolve” are added to the system. These are available as follows:

| <u>Selection</u> | “New...” (empty) | “Move to new...” | “Dissolve” |
|---------------------------|---------------------|---------------------|------------|
| 1 Sub-Assembly | • | • | • |
| 1 Part | •* | • | |
| Any Multiple Selection | | • | |

* In this case, an empty sub-assembly would be created in the same assembly as the selected part.

- **Drag/Drop:** Drag/drop is the primary means for moving components from one sub-assembly to another. The drop site can be a sub-assembly icon or a part icon. If the drop site is a part, the components are moved the part’s immediate parent assembly. A “promote/demote” mouse token is provided.
- **Confirmation Dialogs:** A dialog is always shown when any item needs to be deleted to complete the create/move/dissolve operation. The user is given the choice to allow deletion or cancel. A similar dialog is also shown when mates need to be *moved* to another assembly. However, this dialog is equipped with a “Ask before moving mates” checkbox, which the user can clear to avoid being asked again.